IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Plush, et al.	)
Appl. No.	:	10/023,037	)
Filed	:	December 6, 2001	)
For	:	METHOD AND APPARATUS FOR GENERATING BILLING DATA IN A TELECOMMUNICATION SYSTEM	)
Examiner	:	Charles Chiang Chow	)
Group Art Unit	:	2685	)

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APPELLANT'S BRIEF

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 2327
Arlington, VA 22202

Dear Sir:

Appellant in the above-captioned patent application is appealing the final rejection of Claims 27-30 in a final Office Action dated February 24, 2004. Pursuant to 37 C.F.R. § 1.191, the examiner's decision in the patent application is therefore in condition for appeal to the Board of Patent Appeals and Interferences.

Pursuant to 37 C.F.R. § 1.192, this appeal brief is filed in triplicate. A check in the amount of $330 is included herewith for the fee of filing an appeal brief pursuant to 37 C.F.R. § 1.17(c). If for some reason Appellant has not paid sufficient fees for filing this appeal brief, please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

I. **TABLE OF CONTENTS**

II. <u>TABLE OF AUTHORITIES</u>

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III. REAL PARTY IN INTEREST

The real party in interest is Orange Personal Communications Services Limited, of Bristol, United Kingdom, which is the assignee of the patent application.

IV. RELATED APPEALS & INTERFERENCES

None of the Appellant, Appellant's legal representative, or assignee is aware of any appeal or interference which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

V. STATUS OF CLAIMS

The patent application was filed on December 6, 2001 with a total of 26 claims, and was amended by a preliminary amendment canceling originally filed Claims 1-26 and adding Claims 27-30. In a first Office Action, dated July 30, 2003, Claims 27-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,979,207 to Baum, et al. (hereinafter "Baum") in view of U.S. Patent No. 6,173,046 B1 to Jagadish, et al. (hereinafter "Jagadish"), and further in view of WIPO Publication No. WO 96/20,570 to Janhonen, et al. (hereinafter "Janhonen"). Appellant filed a response on November 26, 2003 and did not amend the claims.

In a final Office Action dated February 24, 2004, the Examiner sustained the same rejection as in the first Office Action, by rejecting Claims 27-30 under 35 U.S.C. § 103(a) as being unpatentable over Baum in view of Jagadish, and further in view of Janhonen.

In summary, Claims 27-30 stand finally rejected.

VI. STATUS OF AMENDMENTS

Appellant did not file any amendment subsequent to the final rejection of the claims.

VII. SUMMARY OF INVENTION

Generally, Appellant's invention is directed to a method of generating billing data for subscribers in a telecommunications system by administering a shared usage plan. In one

embodiment, the invention provides a method of implementing a usage allocation for associated groups of subscribers in a mobile communications system.[1]

With reference to Figure 1, one embodiment of a cellular communications system, such as a GSM network, comprises a mobile switching center (MSC) 2 connected via communications links to a plurality of base station controllers (BSCs) 4.[2] Each BSC 4 is configured to control one or more base transceiver stations (BTSs) 6, and each BTS 6 transmits radio signals to and receives radio signals from a plurality of mobile stations 8 which are in an area or "cell" served by that BTS.[3]

When a user of a mobile station 8 utilizes a telecommunications service provided by the mobile communications network, such as initiating a voice call, sending data or text messages, or retrieving voicemail, a call detail record is generated in the network and sent to a billing center 16.[4] The call detail record includes, *inter alia*, the international mobile subscriber identity (IMSI) and the telephone directory number (MSISDN) used for the call, and data providing for the computation of a charge for the call.[5]

A number of subscription types and charging structures may be implemented, and any number of subscribers may be allocated to a single subscription depending on the subscription type held.[6] For each subscription type, a "bundle" of pre-paid call time usage allocation is provided for use during a predefined time period, such as one month.[7] The billing center 16 holds call detail records, subscriber data identifying the group to which the subscriber belongs, bundle records, group records indicating the type of subscription held for the group, and billing account records.[8] Each bundle record is associated with a particular subscription, and the subscription may be an individual subscriber subscription or a group subscription.[9] A bundle record holds data indicating an amount of pre-paid allocated call-

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[1] *See Spec.* at page 3, lines 19-21.

[2] *Id.* at page 6, ll. 14-17.

[3] *Id.* at page 6, ll. 18-22.

[4] *Id.* at page 7, ll. 10-14.

[5] *Id.* at page 7, ll. 15-18.

[6] *Id.* at page 8, ll. 6-11, Table 1.

[7] *Id.* at page 8, l. 11 - page 9, l. 1.

[8] *Id.* at page 11, ll. 1-8.

[9] *Id.* at page 11, ll. 14-15.

time usage (a call time "bundle") allowed for the subscription during each billing period, and data indicating the amount of that usage allocation remaining during a billing period.[10] For a group subscription, the bundle is related to a number of directory numbers (MSISDNs) and may be used by any subscriber in the group in part or in whole.[11]

In reference to Figure 4, a call detail record for a subscriber call is analyzed to determine whether the call is of a standard type 50, and if the call is of a standard type then the call detail record, or call data, is further analyzed to identify the bundle record with the appropriate usage allocation data for the subscriber.[12] The directory number (MSISDN) is used to determine the bundle record for the group to which the subscriber belongs in step 52.[13] If the bundle record indicates that all of the bundle time originally available at the start of the billing period has already been used, then the standard tariff charge for the group subscription is used to calculate the charge for the entire call in step 54.[14]

VIII. ISSUE(S) ON APPEAL

The issues on appeal are whether:

(1)   Claims 27-30 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 4,979,207 to Baum, et al. ("Baum") in view of U.S. Patent No. 6,173,046 B1 to Jagadish, et al. (Jagadish), and further in view of WIPO Publication No. WO 96/20,570 to Janhonen, et al. (Janhonen).

IX. GROUPING OF CLAIMS

In arguing patentability of the claims, where a number of claims contain features which are believed to be common to these claims and patentable over the art, the claims will be discussed in groups. It is believed that only the following claim group stands or falls together:

Claims 27-30.

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[10] *Id.* at page 11, ll. 15-19.
[11] *Id.* at page 12, ll. 1-2.
[12] *Id.* at page 12, ll. 6-12, ll. 18-20.
[13] *Id.* at page 12, ll. 21-22.
[14] *Id.* at page 13, ll. 3-9 and Fig. 4.

It is to be understood that the above claim group only stands or falls together insofar as the particular rejections before the Board apply. It is believed that there are patentable distinctions among all claims.

X. ARGUMENT

Claims 27-30 are not unpatentable under 35 U.S.C. § 103(a) over Baum in view of Jagadish, and further in view of Janhonen as set forth in Section A below.

A.   The Baum Reference, Either Alone or In Combination With the Jagadish Reference and the Janhonen Reference, Fails to Teach or Suggest Assigning a Shared Usage Allocation of a Predefined Magnitude to a Group of Subscribers

It is well-settled that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.[15] In addition, "a showing of a suggestion, teaching, or motivation to combine [or modify] the prior art references is an 'essential component of an obviousness holding'."[16] The Examiner can satisfy the burden of showing obviousness of the combination or modification "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references."[17] As explained below, Appellant submits that the Examiner failed to establish a *prima facie* case of obviousness of Claims 27 and 30 because there is no teaching in either Baum, Jagadish, or Janhonen to modify the teachings of Baum with those of Jagadish and Janhonen, and neither Baum, Jagadish, or Janhonen, either alone or in combination, teach or suggest all of the limitations recited in each of Claims 27 and 30.

In rejecting Claims 27 and 30, the Examiner cited Baum as disclosing all of the elements as recited in each of Claims 27 and 30 except: (1) assigning a shared usage allocation of an original magnitude to each group that is available for usage by the group at a

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[15] *In re Royka*, 180 U.S.P.Q. 580 (CCPA 1974).
[16] *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998).
[17] *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992).

beginning of a predetermined period;[18] (2) determining if a subscriber of one of the groups uses a telecommunications service;[19] and (3) accessing, upon determining that the subscriber uses the telecommunications service, the record for the group of which the subscriber is a member.[20] The Examiner cited Jagadish as teaching the assignment of a shared usage allocation of an original magnitude to each group for usage by the group at a beginning of a predetermined period,[21] and to Jahhonen as teaching the remaining elements of the claims not taught by Baum.[22] Ultimately, the Examiner asserted that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Baum to include the selected teachings of Jagadish and Janhonen.[23]

Appellant respectfully disagrees with the Examiner's assertions. First, there is no teaching or suggestion in either Baum, Jagadish, or Janhonen of "assigning a shared usage allocation of an original magnitude to each of [a plurality of] groups that is available for usage by the group", and where "a common charging tariff [is] applied ... when said shared usage allocation has been exhausted", as recited in Claim 27. Similarly, there is no teaching or suggestion in Baum, Jagadish, or Janhonen of "relating a shared usage allocation of an original magnitude to each of [a plurality of] groups", as recited in Claim 30. Second, there is no suggestion or motivation in Baum, Jagadish, or Janhonen to combine the relevant teachings of the references in order to arrive at the claimed combination. Furthermore, the Examiner has failed to point to some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art that would lead that individual to combine the relevant teachings of the references.

As background, Baum describes a method of processing cellular telephone call detail data for billing multi-line customers for cellular telephone services. A customer, such as a business, owning multiple cellular telephones can receive consolidated billing and usage information for all of its cellular telephones as well as individual bills for each of the cellular

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[18] *Final Office Action* at page 4, ll. 11-13.
[19] *Id.* at page 5, ll. 17-18.
[20] *Id.* at page 5, ll. 18-19.
[21] *Id.* at page 4, ll. 15-17; page 8, ll. 11-19.
[22] *Id.* at page 5, l. 5 – page 6, l. 1.
[23] *Id.* at page 5, ll. 12-15; page 6, ll. 10-13.

telephone users.[24]   A unique key identification number is associated with each multi-line customer.[25]   Call detail data is received and batch processed on a periodic basis to apply a rate, add the user's key identification number and information format, and consolidate the new call detail data with the previous data using tariff tables and a service profile file.[26]   The call detail and customer detail files are sorted in accordance with the key identification number and information format of the multi-line customer.[27]

As recognized by the Examiner, Baum fails to teach or suggest assigning a shared usage allocation of an original magnitude to a group of subscribers that is available for usage by the group at a beginning of a predetermined period, wherein the original magnitude of each usage plan is predetermined in accordance with the usage plan held by a group.[28]

Jagadish describes a system and method for customer group billing, wherein a group of customers have a group calling plan, but each customer has a separate billing account.[29] The billing for each customer is priced based on the group calling plan and the usage of all members of a group.[30]   A customer profile is maintained in a database for each individual customer, and each customer profile includes a parameter indicating the billing group of which the customer is a member.[31]   Each customer profile also includes a discount parameter indicating, for example, that each member of group 1 is to receive a 10% discount once total group usage reaches $1,000.[32]

The billing analysis system described by Jagadish may adjust charges for all members of a group based on the total group charges for a given billing period.   For example, all members of a group may receive a 10% discount once total group usage reaches $1,000, and successive calls made by group members will receive a 10% discount.[33]

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[24] *Baum* at col. 2, ll. 23-27.
[25] *Id.* at col. 2, ll. 28-29.
[26] *Id.* at col. 2, ll. 43-54.
[27] *Id.* at col. 4, l. 67 – col. 5, l. 2; Figure 5.
[28] *Final Office Action* at page 4, ll. 11-13.
[29] *Jagadish* at col. 1, ll. 23-26.
[30] *Id* at col. 1, ll. 26-27.
[31] *Id.* at col. 3, ll. 41-46 and 55-59.
[32] *Id.* at col. 3, ll. 48-55.
[33] *Id.* at col. 3, ll. 53-55.

Jagadish, however, does not describe assigning a shared usage allocation of an original magnitude to each of a plurality of groups of subscribers that is available for usage by the group at a beginning of a predetermined period, and analyzing call data to allow a common charging tariff is applied for each subscriber in a group for which a combined subscription is held when the shared usage allocation has been *exhausted* (similar language is found in Claim 30). In contrast, Jagadish teaches a system wherein a group has a usage *threshold* ($1,000) *to meet* before a reduced rate is applied. This is not an allocation "available for usage" as there is nothing allocated to the group members in Jagadish for them to use.[34]

Thus, as Jagadish fails to teach or suggest the features of Claims 27 and 30 missing from Baum, Appellant respectfully submits that the combination of Baum and Jagadish fails to teach or suggest all of the elements as recited in Claims 27 and 30.

Janhonen describes a method for improving charging criteria in a mobile telephone network. A group consisting of several cells in a mobile telephone network is chosen as a group of special cells.[35] Upon call establishment, the MSC of the calling subscriber analyzes whether the location cell of the calling subscriber and/or that of the called subscriber are members of the group of special cells.[36] If the analysis is positive, then the charging criteria determined for the group is applied.[37] Thereby, call charges can be determined in real-time based on the location cell of the calling subscriber and/or the called subscriber. For example, special charging criteria can be applied for certain intra-cell or inter-cell calls.[38] Janhonen, however, does not teach that the members of the group of special cells have a single shared usage plan, or that the group is assigned a shared usage allocation of an original magnitude. Thus, Janhonen does not cure the deficiencies of either Baum or Jagadish. Therefore, the combination of Baum, Jagadish, and Janhonen fails to teach or suggest every element as set forth in each of Claims 27 and 30.

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[34] *See* Claim 27, line 6.
[35] *Janhonen* at page 5, ll. 23-25.
[36] *Id.* at page 5, ll. 25-28.
[37] *Id.* at page 5, ll. 29-30.
[38] *Id.* at page 6, ll. 22-24.

B.   The Examiner Has Not Met His Burden of Showing a Motivation to Combine Baum and Jagadish

Finally, there is no suggestion or motivation in either Baum, Jagadish, or Janhonen to combine reference teachings as suggested by the Examiner, and the Examiner has failed to point to some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art that would lead that individual to combine the relevant teachings of the Baum and Jagadish references.

In order to argue that one of ordinary skill in the art would have been motivated to combine prior art references, the Federal Circuit has found that an examiner must make specific findings of fact regarding the level of skill in the art.[39] General conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support those findings will not support an obviousness rejection.[40] An examiner must provide specific factual findings on sound technical and scientific reasoning to support his or her conclusion of common knowledge.[41] A large range of prior art sources in an obviousness rejection does not diminish the requirement for actual evidence; a showing must be clear and particular.[42] Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence".[43]

The Examiner argued that it would have been obvious to modify Baum and to include the group billing plan described by Jagadish "such that the members could be benefited by a discount price from the group billing plan."[44] However, the Examiner has not objectively shown that the Baum reference should or could be modified as proposed with positive and concrete evidence of record.

In addition, due to the contrasting purposes of the methods described by Baum and Jagadish, it is not clear how or why the method taught by Baum would or could be modified

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[39] *In re Dembiczak*, 175 F.3d 994, 1001 (Fed. Cir. 1999).
[40] *In re Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (Fed. Cir. 2001).
[41] *See In re Soli*, 317 F.2d at 946, 37 USPQ at 801 (CCPA 1963).
[42] *In re Dembiczak*, 175 F.3d at 999.
[43] *Id.*
[44] *Final Office Action* at page 5, ll. 12-15.

with the billing plan described by Jagadish. Jagadish's billing method is directed to a system wherein a number of customers are members of a group so as to benefit from a group calling plan price, *but who have separate billing accounts*,[45] whereas the method described by Baum is directed to a multi-line customer and provides for a customer owning multiple cellular telephones to receive *consolidated billing*.[46] As the intended purposes of the Jagadish method and the Baum method are in conflict, there can be no motivation to combine reference teachings.

Thus, as neither Baum, Jagadish, or Janhonen, either alone or in combination, teach or suggest all of the limitations of Claims 27 and 30, Appellant submits that the invention of Claims 27 and 30 are not obvious in view of Baum, Jagadish, and Janhonen.

Because Claims 28 and 29 depend from Claim 27, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features. Thus, Appellant submits that the rejection of Claims 27-30 under 35 U.S.C. § 103(a) be withdrawn, and that those claims be allowed.

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[45] *Jagadish* at col. 1, ll. 22-26.
[46] *Baum* at col. 2, ll. 23-27.

Appellant submits that the claim limitations discussed above represent only illustrative distinctions from the prior art. There may be other patentable features that distinguish the claimed invention from the prior art. In view of the foregoing, Appellant respectfully submits that all of the pending claims in the present application are in condition for allowance.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 8/23/04   By: _____

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APPENDIX A

<u>CLAIMS ON APPEAL</u>:

1.   A method of generating billing data for subscribers in a telecommunications system by administering a shared usage plan, comprising:

registering a plurality of groups of subscribers, each of said groups comprising a plurality of subscribers for which a single shared usage plan is held;

assigning a shared usage allocation of an original magnitude to each of said groups that is available for usage by the group at a beginning of a predetermined period, wherein the original magnitude of each shared usage plan is predetermined in accordance with the shared usage plan held by a group;

maintaining a record for each group of subscribers, wherein the record includes subscriber identification data for each subscriber and the shared usage allocation assigned to the group;

determining if a subscriber of one of said groups uses a telecommunications service;

accessing, upon determining that the subscriber uses the telecommunications service, the record for the group of which the subscriber is a member; and

analyzing call data so as to apply one of a number of different predetermined call charging tariffs to a call made by the subscriber, in dependence of the group of which the subscriber is a member, in order to generate charging data for said call and to allow a common charging tariff to be applied for each subscriber in a group for which a combined subscription is held when said shared usage allocation has been exhausted.

2.   The method of Claim 1, wherein the original magnitude is a predetermined number of minutes.

3.   The method of Claim 1, wherein the original magnitude is a predetermined amount of money.

4.   A method of generating billing data for subscribers in a telecommunications system, said method comprising:

storing subscriber records for a plurality of groups of subscribers, each of said groups comprising a plurality of subscribers for which a combined subscription is held, said groups comprising different numbers of subscribers;

relating a shared usage allocation of an original magnitude to each of said groups at the start of each of a series of predetermined periods, the original magnitude of each of said shared usage allocation being predetermined in accordance with the subscription type held for each group, respectively; and

analyzing call data so as to apply one of a number of different predetermined call charging tariffs to a call made by a subscriber in one of said groups, in dependence of the group of which the subscriber is a member, in order to generate charging data for said call and to allow a common charging tariff to be applied for each subscriber in a group for which a combined subscription is held when said shared usage allocation has been exhausted.

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